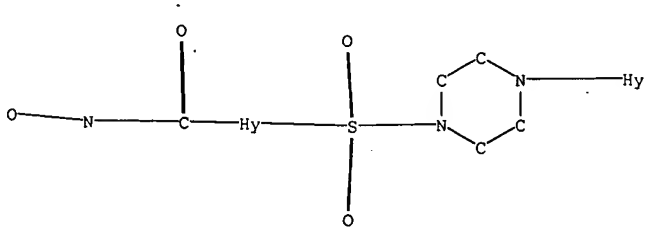
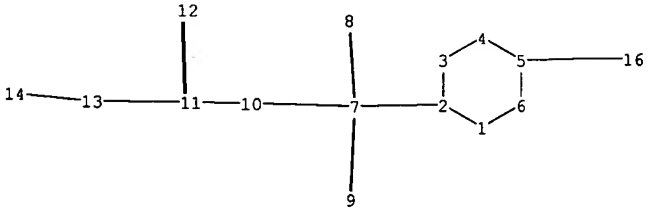
C:\stnweb\Queries\10618288.str



Part I



chain nodes :
7 8 9 10 11 12 13 14 16
ring nodes :
1 2 3 4 5 6
chain bonds :
2-7 5-16 7-8 7-9 7-10 10-11 11-12 11-13 13-14
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6
exact/norm bonds :
1-2 1-6 2-3 2-7 3-4 4-5 5-6 5-16 7-8 7-9 7-10 10-11 11-12
11-13 13-14
isolated ring systems :
containing 1 :

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 9:CLASS
10:Atom 11:CLASS 12:CLASS 13:CLASS 14:CLASS 16:Atom
Generic attributes :
16:
Saturation : Unsaturated

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DICTIONARY FILE UPDATES:  21 JUN 2005  HIGHEST RN 852656-52-1

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

*************************************************************************
*                                                                       *
* The CA roles and document type information have been removed from     *
* the IDE default display format and the ED field has been added,       *
* effective March 20, 2005.  A new display format, IDERL, is now        *
* available and contains the CA role and document type information.     *
*                                                                       *
*************************************************************************

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=>
L12     STRUCTURE UPLOADED

=> s l12
SAMPLE SEARCH INITIATED 19:45:32 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -    154 TO ITERATE

100.0% PROCESSED     154 ITERATIONS                          35 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:         2336 TO     3824
PROJECTED ANSWERS:             346 TO     1054

L13          35 SEA SSS SAM L12

=> d l13 1 5 10 35

L13  ANSWER 1 OF 35  REGISTRY  COPYRIGHT 2005 ACS on STN
RN   688307-45-1  REGISTRY
ED   Entered STN:  01 Jun 2004
CN   2H-Pyran-4-carboxamide, tetrahydro-N-hydroxy-4-[[4-[4-
     (trifluoromethoxy)phenyl]-1-piperazinyl]sulfonyl]- (9CI)   (CA INDEX NAME)
FS   3D CONCORD
MF   C17 H22 F3 N3 O6 S
CI   COM
SR   CA
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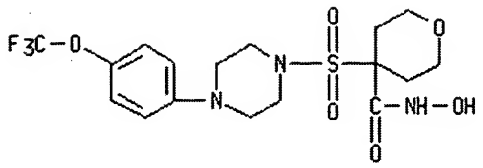
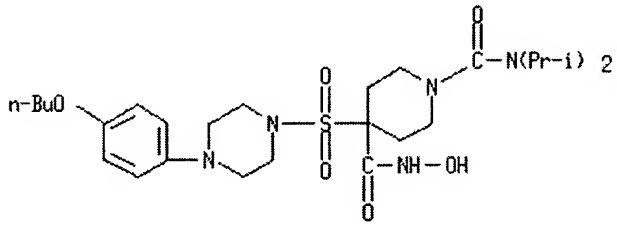


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

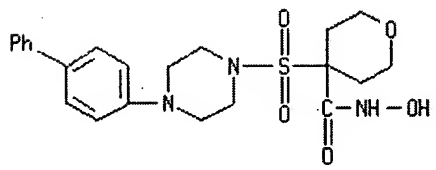
L13 ANSWER 5 OF 35 REGISTRY COPYRIGHT 2005 ACS on STN
RN 622395-09-9 REGISTRY
ED Entered STN: 01 Dec 2003
CN 1,4-Piperidinedicarboxamide, 4-[[4-(4-butoxyphenyl)-1-piperazinyl]sulfonyl]-N4-hydroxy-N1,N1-bis(1-methylethyl)- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C27 H45 N5 O6 S
CI COM
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L13 ANSWER 10 OF 35 REGISTRY COPYRIGHT 2005 ACS on STN
RN 622394-60-9 REGISTRY
ED Entered STN: 01 Dec 2003
CN 2H-Pyran-4-carboxamide, 4-[(4-[1,1'-biphenyl]-4-yl-1-piperazinyl)sulfonyl]tetrahydro-N-hydroxy- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C22 H27 N3 O5 S
CI COM
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL



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**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

              1 REFERENCES IN FILE CA (1907 TO DATE)
              1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L13  ANSWER 35 OF 35  REGISTRY  COPYRIGHT 2005 ACS on STN
RN   210915-73-4  REGISTRY
ED   Entered STN:  06 Sep 1998
CN   2-Piperidinecarboxamide, 1-[[4-(4-chloro-2-methylphenyl)-1-
     piperazinyl]sulfonyl]-N-hydroxy- (9CI)  (CA INDEX NAME)
FS   3D CONCORD
MF   C17 H25 Cl N4 O4 S
SR   CA
LC   STN Files:   CA, CAPLUS, TOXCENTER, USPATFULL
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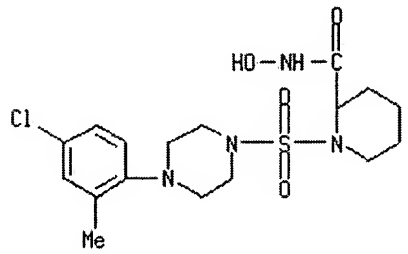


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**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

              2 REFERENCES IN FILE CA (1907 TO DATE)
              2 REFERENCES IN FILE CAPLUS (1907 TO DATE)


=>
L14     STRUCTURE UPLOADED

=> s l14
SAMPLE SEARCH INITIATED 19:48:28 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -    154 TO ITERATE

100.0% PROCESSED     154 ITERATIONS                          5 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:         2336 TO     3824
PROJECTED ANSWERS:               5 TO      234

L15           5 SEA SSS SAM L14

=> file caplus
COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
                                                 ENTRY    SESSION
FULL ESTIMATED COST                               9.94     380.64

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)    SINCE FILE      TOTAL
                                                 ENTRY    SESSION
CA SUBSCRIBER PRICE                               0.00      -3.65

FILE 'CAPLUS' ENTERED AT 19:48:39 ON 22 JUN 2005
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FILE COVERS 1907 - 22 Jun 2005 VOL 142 ISS 26
FILE LAST UPDATED: 21 Jun 2005 (20050621/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

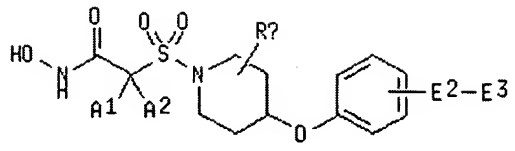
=> s l15
L16 2 L15

=> d l16 1-2 bib abs hitstr

L16 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN
Full Text
AN 2005:409509 CAPLUS
DN 142:463765
TI Preparation of piperidinyl- and piperazinylsulfonylmethyl hydroxamic acids and their use as protease inhibitors
IN Brown, David L.; Grapperhaus, Margaret L.; Kassab, Darren J.; Massa, Mark A.; Mcdonald, Joseph J.; Mullins, Patrick B.; Rico, Joseph G.; Schmidt, Michelle A.
PA Pharmacia Corporation, USA
SO PCT Int. Appl., 644 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005042521	A2	20050512	WO 2004-US36666	20041103
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRAI	US 2003-700202	A	20031103		

GI



I

AB Title compds. I [A1-2 = H, alkyl, alkoxyalkyl, etc.; Rx = halo, CN, OH, NO2, etc.; E2 = CO, COO, OCO, amino, etc.; E3 = alkyl, alkenyl, alkynyl, etc.] are prepd. For instance, 4-[[4-(5-butylpyrazin-2-yl)piperazin-1-yl]sulfonyl]-N-(hydroxy)tetrahydro-2H-pyran-4-carboxamide•2HCl (II) is prepd. in 8 steps from 1-(tert-butoxycarbonyl)piperazine, 2-chloropyrazine, butylmagnesium chloride, bis(2-bromoethyl)ether and O-(tetrahydro-2H-pyran-2-yl)hydroxyamine. II exhibits Ki = >10,000 nM for MMP-1, 1.52 nM for MMP-2, 0.696 nM for MMP-9, 1.82 nM for MMP-13 and 4290 nM for MMP-14. I are useful for the treatment of conditions assocd. with MMP activity and/or aggrecanase activity.

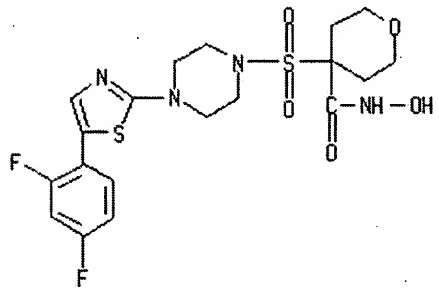
IT **622385-43-7P**

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of piperidinyl-and piperazinyl-sulfonylmethyl hydroxamic acids and their use as matrix metalloproteinase inhibitors)

RN 622385-43-7 CAPLUS

CN 2H-Pyran-4-carboxamide, 4-[[4-[5-(2,4-difluorophenyl)-2-thiazolyl]-1-piperazinyl]sulfonyl]tetrahydro-N-hydroxy-, monohydrochloride (9CI) (CA INDEX NAME)



HCl

L16 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN

Full Text

AN 2003:875282 CAPLUS

DN 139:364961

TI Preparation of piperidinyl-and piperazinyl-sulfonylmethyl hydroxamic acids and their use as protease inhibitors

IN Barta, Thomas E.; Becker, Daniel P.; Bedell, Louis J.; Boehm, Terri L.; Brown, David L.; Carroll, Jeffery N.; Chen, Yiyuan; Fobian, Yvette; Freskos, John N.; Gasiecki, Alan F.; Grapperhaus, Margaret; Heintz, Robert M.; Hockerman, Susan L.; Kassab, Darren J.; Khanna, Ish Kumar; Kolodziej, Stephen A.; Massa, Mark; Mcdonald, Joseph; Mischke, Brent V.; Mischke, Deborah A.; Mullins, Patrick B.; Nagy, Mark; Norton, Monica B.; Rico, Joseph G.; Schmidt, Michelle A.; Stehle, Nathan W.; Talley, John J.; Vernier, William F.; Villamill, Clara I.; Wang, Lijuan Jane; Wynn, Thomas A.

PA Pharmacia Corporation, USA; et al.
SO PCT Int. Appl., 819 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003091247	A2	20031106	WO 2003-US13123	20030425
	WO 2003091247	A3	20040115		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CA 2483314	AA	20031106	CA 2003-2483314	20030425
	US 2005009838	A1	20050113	US 2003-618288	20030425
	EP 1501827	A2	20050202	EP 2003-718529	20030425
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	BR 2003009671	A	20050503	BR 2003-9671	20030425
PRAI	US 2002-375598P	P	20020425		
	US 2002-380713P	P	20020515		
	US 2002-392021P	P	20020627		
	WO 2003-US13123	W	20030425		

OS MARPAT 139:364961
GI

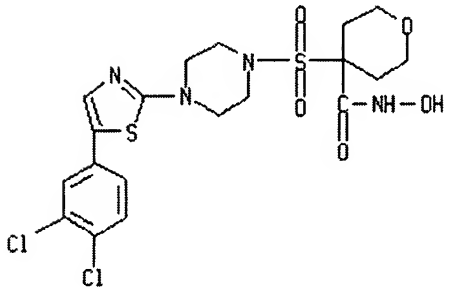
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Title compds. I [A1 and A2 together with the C to which they are bonded join to form (un)substituted-heterocyclyl or -carbocyclyl, or A1 and A2 are independently selected from H, alkyl, alkoxyalkyl, alkenyl, alkynyl, etc.; Rx = H, halo, CN, OH, NO2, alkyl, alkenyl, alkoxy, alkoxyalkyl, heterocyclyl, etc.; Y = N, CH, or CRx; E1 = (un)substituted heteroaryl; E2 = O, CO, C(O)O, OC(O), bond, S, etc.; E3 = halo, CN, (un)substituted-alkyl, -alkenyl, -alkynyl, -heterocyclyl, heterocyclylalkyl, etc.] and their pharmaceutically acceptable salts are prepd. and disclosed as protease inhibitors. Thus, e.g., II·HCl was prepd. with piperazine ring formation occurring via cyclization of 2,2,2-trifluoroethoxyaniline (prepn. given) with N,N-di(2-chloroethyl)methylsulfonamide (prepn. given) to provide piperazinyl intermediate III which was converted in five addnl. steps to the desired product. This invention is directed generally to proteinase (also known as 'protease') inhibitors, and more particularly, inhibitors of matrix metalloproteinase (also known as 'matrix metalloprotease' or 'MMP') activity and/or aggrecanase activity. In assays to det. inhibition consts. (Ki) against MMP-1, MMP-2, MMP-9, MMP-13 and MMP-14, I possessed values ranging from 0.13->10,000. This invention also is directed to compns. of such hydroxamic acids, intermediates for the syntheses of such hydroxamic acids, methods for making such hydroxamic acids, and methods for treating conditions (particularly pathol. conditions) assocd. with MMP activity and/or aggrecanase activity.

IT **622393-21-9P 622393-48-0P 622393-63-9P**
622394-04-1P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(claimed compds.; prepn. of piperidinyl-and piperazinyl-sulfonylmethyl hydroxamic acids and their use as matrix metalloproteinase inhibitors)

RN 622393-21-9 CAPLUS
CN 2H-Pyran-4-carboxamide, 4-[[4-[5-(3,4-dichlorophenyl)-2-thiazolyl]-1-piperazinyl]sulfonyl]tetrahydro-N-hydroxy- (9CI) (CA INDEX NAME)



RN 622393-48-0 CAPLUS
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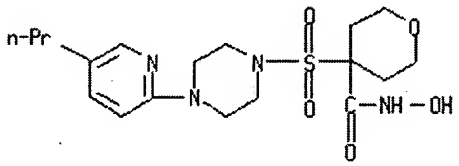
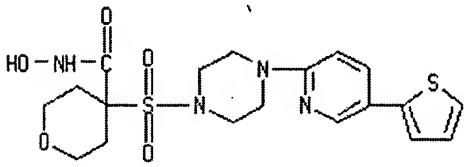


RN 622393-63-9 CAPLUS
CN 2H-Pyran-4-carboxamide, tetrahydro-N-hydroxy-4-[[4-[5-(2-thienyl)-2-pyridinyl]-1-piperazinyl]sulfonyl]- (9CI) (CA INDEX NAME)



RN 622394-04-1 CAPLUS
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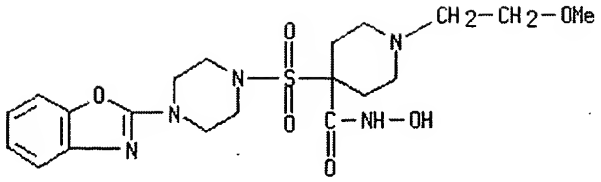


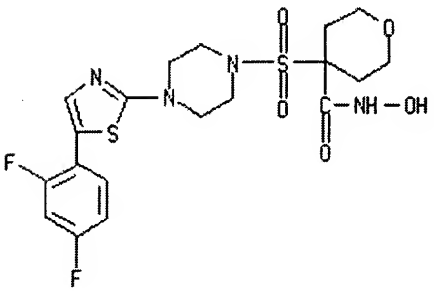
IT **622385-43-7P**

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of piperidinyl-and piperazinyl-sulfonylmethyl hydroxamic acids and their use as matrix metalloproteinase inhibitors)

RN 622385-43-7 CAPLUS

CN 2H-Pyran-4-carboxamide, 4-[[4-[5-(2,4-difluorophenyl)-2-thiazolyl]-1-piperazinyl]sulfonyl]tetrahydro-N-hydroxy-, monohydrochloride (9CI) (CA INDEX NAME)



\# HCl

=> file caold

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	10.33	390.97
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-1.46	-5.11

FILE 'CAOLD' ENTERED AT 19:49:06 ON 22 JUN 2005

FILE COVERS 1907-1966
FILE LAST UPDATED: 01 May 1997 (19970501/UP)

This file contains CAS Registry Numbers for easy and accurate substance identification. Title keywords, authors, patent assignees, and patent information, e.g., patent numbers, are now searchable from 1907-1966. TIFF images of CA abstracts printed between 1907-1966 are available in the PAGE display formats.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file supports REG1stRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

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=> s l15
L17             0 L15

=>
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